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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,736	01/21/2004	Jim Auber	NOR-1086A	3661
37172 7590 04/25/2007 WOOD, HERRON & EVANS, LLP (NORDSON) 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			EXAMINER CARTAGENA, MELVIN A	
			ART UNIT	PAPER NUMBER
			3754	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		04/25/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/25/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. The disclosure is objected to because of the following informalities: it appears the second paragraph to the amendment to the specifications filed in January 30, 2007 should have replaced the paragraph beginning on page 14, line 11, instead of the paragraph beginning on page 19, line 24 as indicated.

2. With respect to statement in page 14, lines 5-7, this statement is incorrect, the fluid pressure upstream the gear pump in the recirculation passageway 34 and the supply channel 20 is always less than the pressure downstream of the gear pump. The sum of the fluid pressure in the recirculation channel 34 and the valve 84 cracking pressure is greater than the pressure in the recirculation outlet 58.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 4, 8, 12 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. According to the specification the pressure in the dispensing path is always greater than the pressure in the recirculation path during operation of the pump and the pressure in the dispensing and recirculation paths would be the same when the pump is not in operation. In addition, the check

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valve 80 would not operate as described and would close the recirculation path if the pressure in the recirculation path were greater than the pressure in the dispensing path. There is no disclosure in the specifications of how the pressure of the liquid in the recirculation path could be greater than the pressure of the liquid in the dispensing path.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5, 9, 10, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,089,413 to Riney et al.

Riney shows a device for dispensing adhesive that performs the steps of pumping liquid through a dispensing path 48 in a manifold to a dispensing module 12, intermittently cycles a dispensing valve 54 in the dispensing module between an open condition, see Fig.3, and an closed condition, see Fig. 2, returning liquid from the module through a recirculation path 66, preventing back flow by closing the recirculation flow path with a valve 94 and valve seat 80, pumping liquid from a supply channel 44 and returning to a recirculation channel 68, during operation of the pump the pressure of the recirculation path is less than that pressure of the dispensing path.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6, 13, 17-20, 22, 23, 25, 26, 28-32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,089,413 to Riney et al. in view of US 4,200,207 to Akers et al.

Riney shows all claimed features as discussed above except for a check valve positioned in the recirculation outlet of each corresponding dispensing modules. Akares shows a hot melt dispenser with a check valve 9 positioned in the recirculation outlet 78c. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the device of Riney by installing a check valve in the recirculation passageway for recycling part or all of the adhesive if the system pressure exceeds the a preset working pressure as taught by Akers.

8. Claims 7, 14, 21, 24, 27 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,089,413 to Riney et al. as modify by US 4,200,207 to Akers et al. as applied to claims 1, 11, 19, 22, 25, 28, 29 and 31 above, and further in view of US 5,523,682 to Leon.

The Riney-Akers combination shows all claimed features as discussed above except for a sensor for determining the position of the check valve. Leon shows a method of detecting the position of a check valve by using an electromagnetic sensor and sending a signal from the sensor to a controller. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the device of the Riney-Akers combination to include an electromagnetic sensor for determining the position of the check valve to verify operation of the

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valve without the use of special internal attachments or sealing means or any disassembly of the elements as taught by Leon.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,089,413 to Riney et al. as modified by US 4,200,207 to Akers et al. and US 5,523,682 to Leon as applied to claim 33 above, and further in view of US 4,543,649 to Head et al.

The Riney-Akers-Leon combination shows all claimed features as discussed above but is silent about the sensor being an acoustic sensor. Head shows an ultrasonic sensor T used in a system for detecting the position of a valve. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the device of the Riney-Akers-Leon combination by using an ultrasonic sensor to determine the position of the valve since ultrasonic energy travels through fluids and can be used to accurately determine the position of valve element as taught by Head.

Response to Arguments

10. Applicant's arguments filed January 30, 2007 have been fully considered but they are not persuasive. With respect to claims 3, 4, 8, 12 and 15 rejected under first paragraph of 35 U.S.C. 112, the applicant's argues that there is support in the specifications for the pressure in the recirculation pathway being greater than the pressure in the supply pathway; however, the specification provides support only for the sum of the pressure in the return pathway plus the cracking pressure of the valve 84 to be greater than the pressure in the supply pathway.

With respect to applicant arguments that the Riney reference does not prevent backflow from the recirculation path when the dispensing valve is cycling. This arguments are not persuasive because in the reference of Riney the pump maintains a constant positive pressure on

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the supply pathway, this prevent any backflow from the recirculation pathway when the valve is cycled from the closed to the open position.

In reference to claim 17, the claim requires a check valve positioned in a recirculation outlet that is coupled in fluid communication with the supply channel. Akers shows a check valve 9 positioned in a recirculation outlet that is in fluid communication with the supply channel.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin A. Cartagena whose telephone number is (571) 272-4924. The examiner can normally be reached on T-F (7:30AM to 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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